



**UNIVERSITY –INDUSTRY COLLABORATION CENTERS PLATFORM**

## **How to Improve the Absorptive Capacity of Local Industry?**

***Industrial Engagement for Industry-Academia Collaborations***

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**Fazilet Vardar Sukan, Prof. Dr., RTTP**

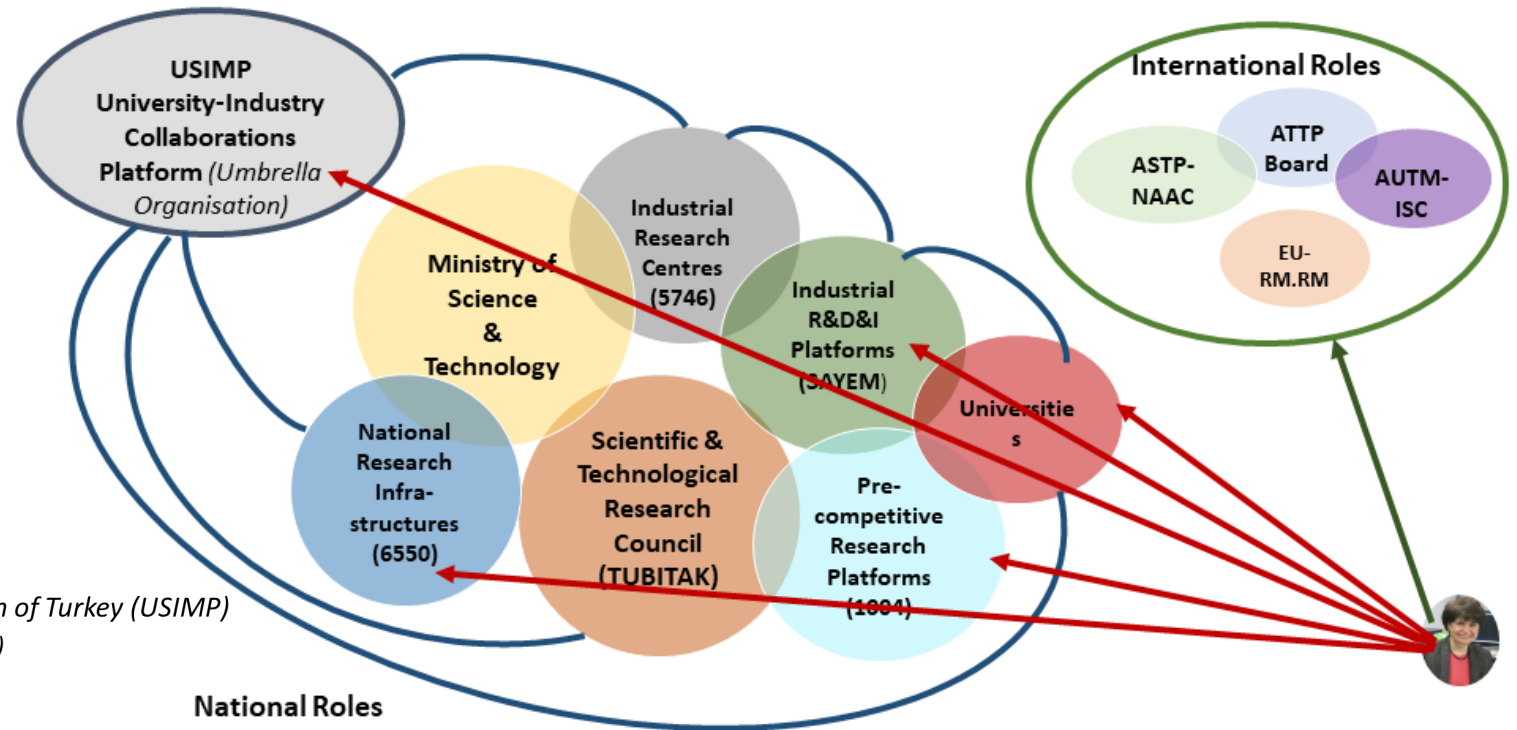
*Vice-President of University-Industry Cooperation Centers Platform of Turkey (USIMP)*

*Board Member of Alliance of Technology Transfer Professionals (ATTP)*

*Director for Research of KE Strategy , Izmir University of Economics, Izmir, Turkey*



# My “Glocal” Perspective: *As a Researcher, TechTransfer Professional & Policy Maker*



## Currently

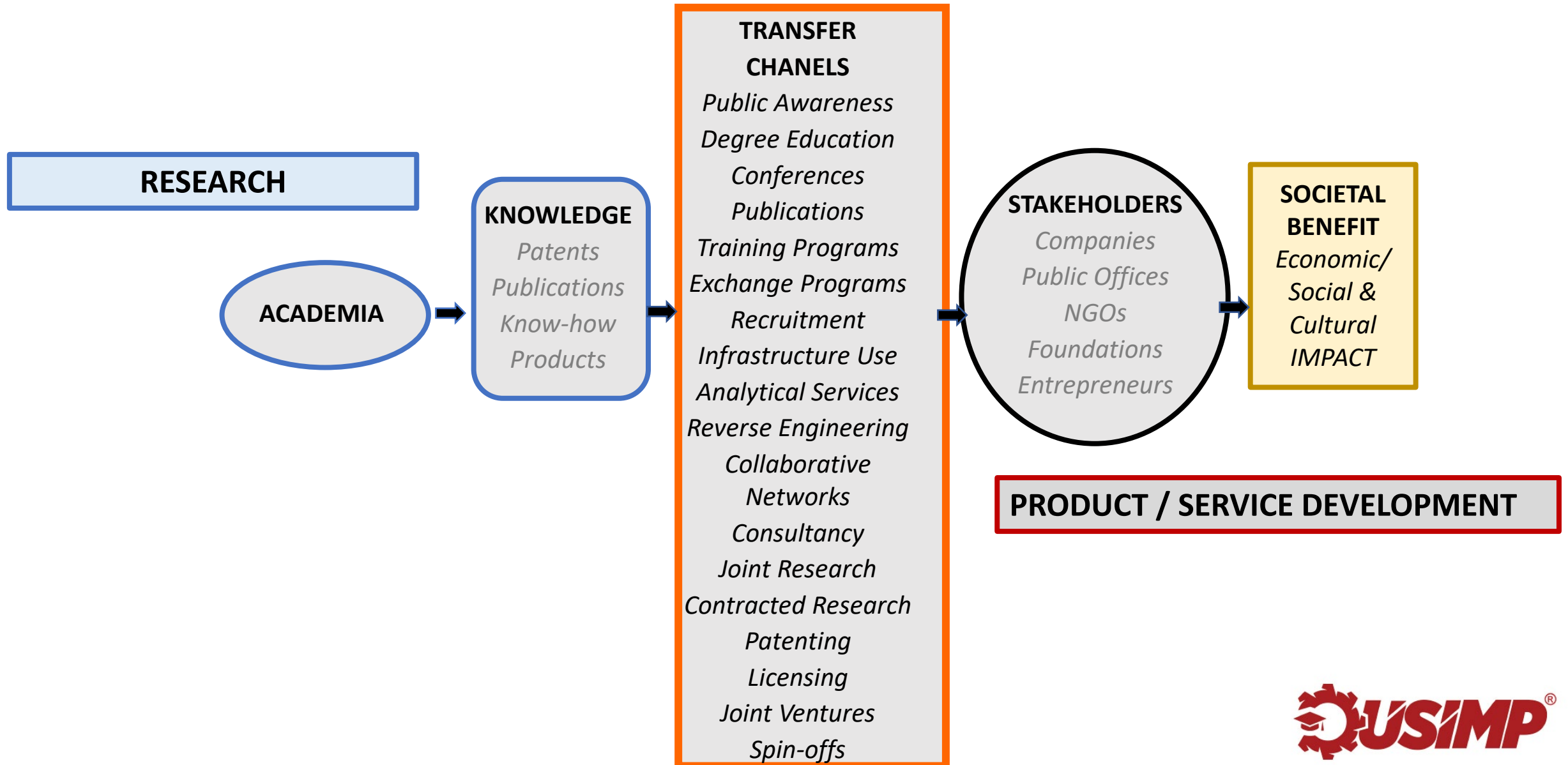
- Vice-President of University-Industry Cooperation Centers Platform of Turkey (USIMP)
- Board Member of ATTP (Alliance of Technology Transfer Professionals)
- AUTM International Strategy Committee MENA Region Chapter
- Member, ASTP - NAAC
- National Ambassador for EU Research Management Network
- Director for Research & KE Strategy, Izmir University of Economics

## Previously:

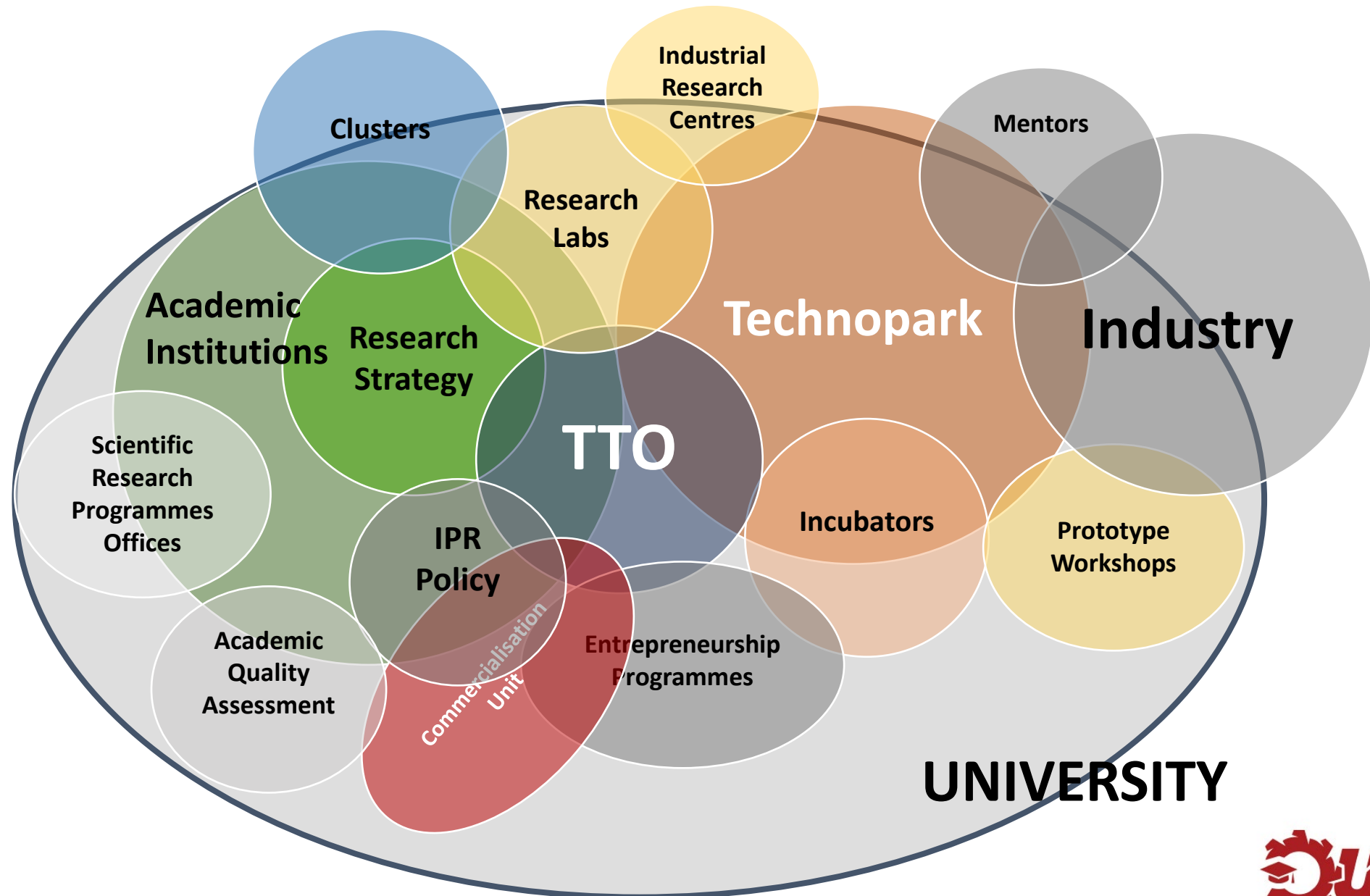
- Director of Sabancı University SUNUM Nanotechnology Centre, Istanbul, Turkey
- Coordinator of 2 mega Precompetitive Research Platforms
- Director of Ege University Technology Transfer Office
- Vice-chairperson of Ege University Technopark and Incubator
- Coordinator of EBICEge Enterprise Europe Network (EEN) Project

# From Knowledge to Societal Benefit

*transforming innovations into commercially viable products and services*



# Ecosystem Mapping



# Who Are the Stakeholders?

**Different stakeholders have different motivations and priorities....**

## **University**

- Prestige & Ranking
- Funding and Infrastructure
- Equal Partnerships
- Placements of Graduates

## **IPR owner / researcher**

- Wants to see their results used!
- Financial return is a bonus

## **Government**

- To make a visible difference in societal impact
- Prove good use of tax-payers money
- ....

## **Commercial entity**

- Revenue Creation- Needs to stay in business
- Skilled manpower – Market aligned courses
- Solutions for bottlenecks
- New products to be competitive
- Has the cost of investment or needs investors

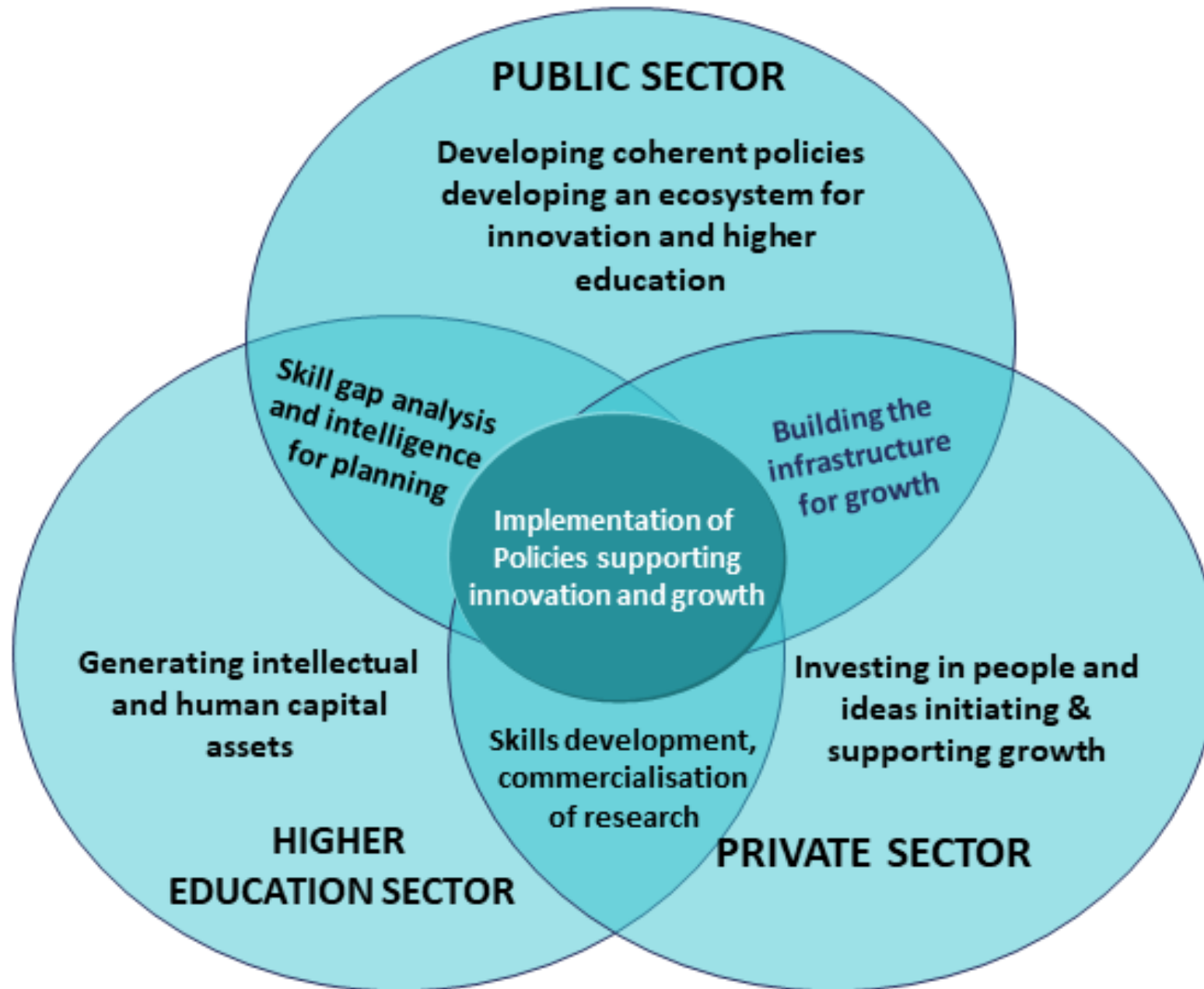
## **End User**

- Needs a reliable tool that does the job
- Needs support from the supplier
- Has a financial limit (as low as zero!)
- Wants to use the tool, not develop it

**..... collaborate in different ways, creating synergies**

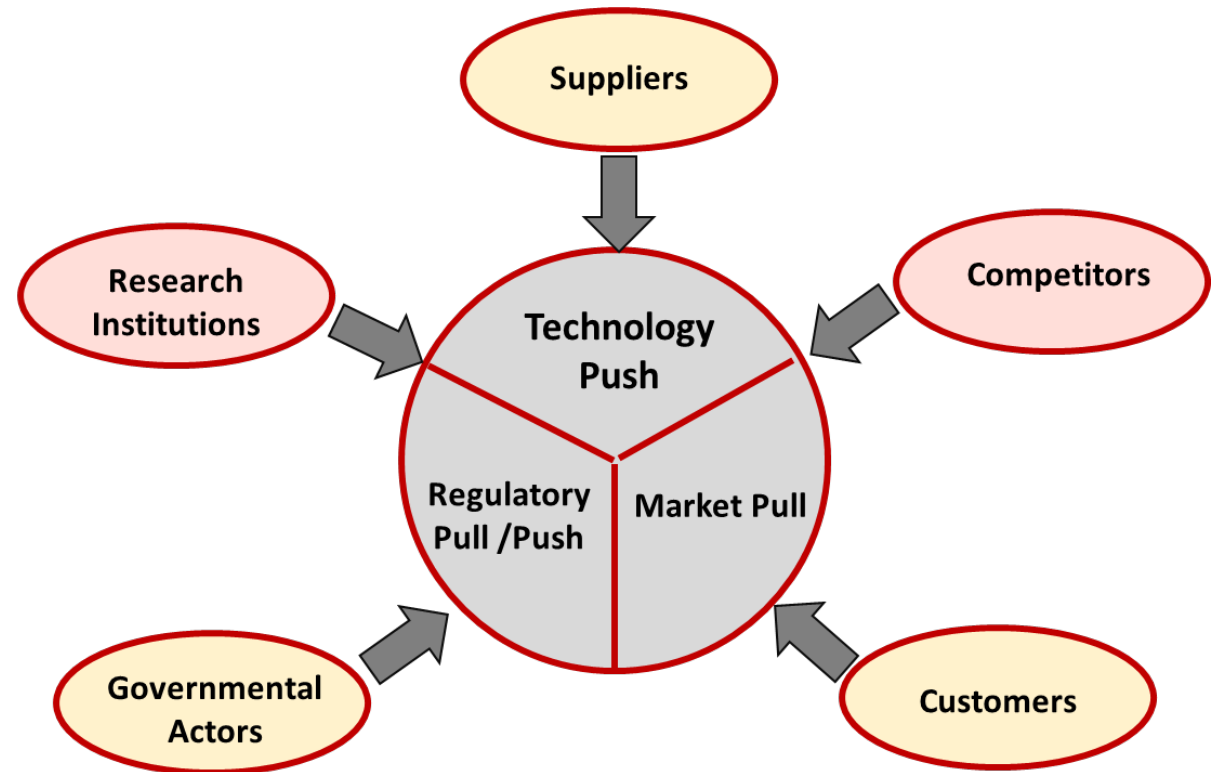


# Stakeholders: *Building local capacity for innovation*



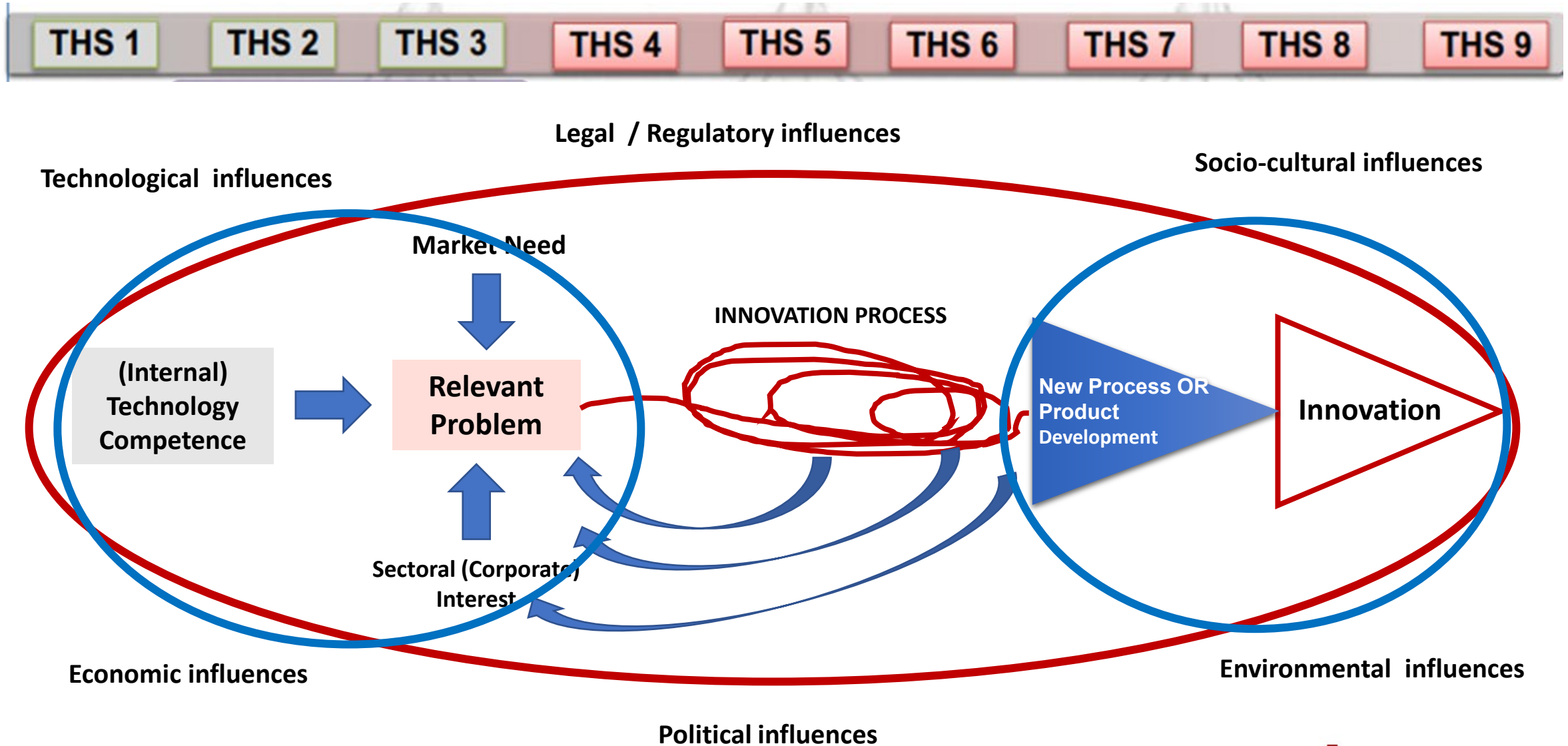
# Determinants for commercialisation - societal impact

- Economic viability
- Technical readiness
- Investment needed to commercialise
- Existing support
- Longevity of product
- Licensing and IPR



**An applied research result may not be used in the way the original researcher envisaged**

# Innovation Process



# Technology Transfer Offices (TTOs)

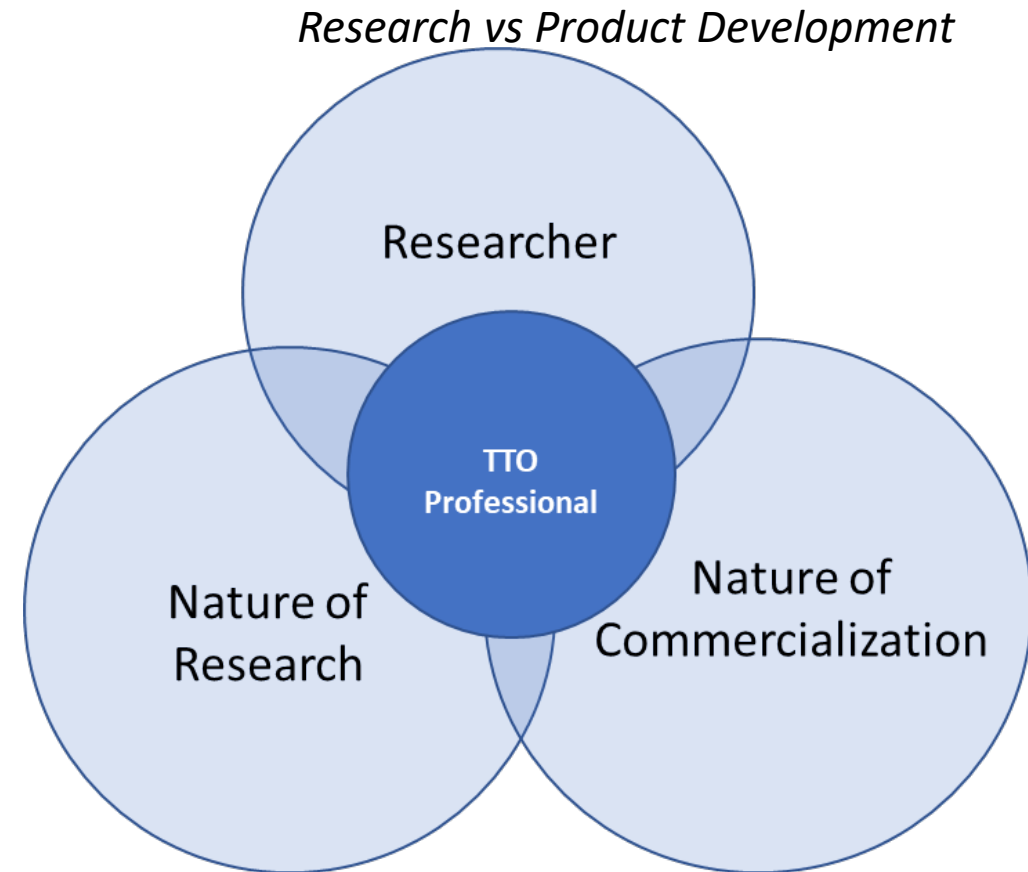
**...are largely silent facilitators**

...trying to reconcile academic research with industrial research, with respect to:

- Timescales
- Funding and justification
- Responsiveness, flexibility and innovation

## **Their role is to:**

- bring together the various actors within the ecosystem,
- build strong partnerships based on shared understanding of challenges and solutions



**TTOs need to develop their capacities with tailor-made tools, to be able to cater for the specific needs of respective target audiences, possessing different levels of maturity.**

# Main Challenges for Developing Ecosystems

## Universities

- **Different levels of excellence** - *but one-size fits all concept and questionable institutional autonomy*
- **Different Focus** - *Teaching vs Research*
- **Rigid institutional structures** restricting initiative taking - Lack of an innovation-friendly human resource policy
- **Limited interdisciplinarity** and institutional cooperation
- Over-extended **teaching load**
- **Insufficient new skills** in university administrative and academic staff,
- **Not enough incentives** / motivation for academicians -*Permanent positions as civil servants and promotions not strictly based on performance*
- **Different levels of maturity** in TTOs
- **Limited cross-fertilisation** for research and economic output

# Main Challenges for Developing Ecosystems -2

## Companies

- Main concern **immediate survival** in economic instability
- **Different levels** of R&D focus
- **Insufficient awareness** of benefits of collaboration with university
- **Lack of trust** and insufficient use of available R&D funds

## GENERAL ATTITUDES OF STAKEHOLDERS

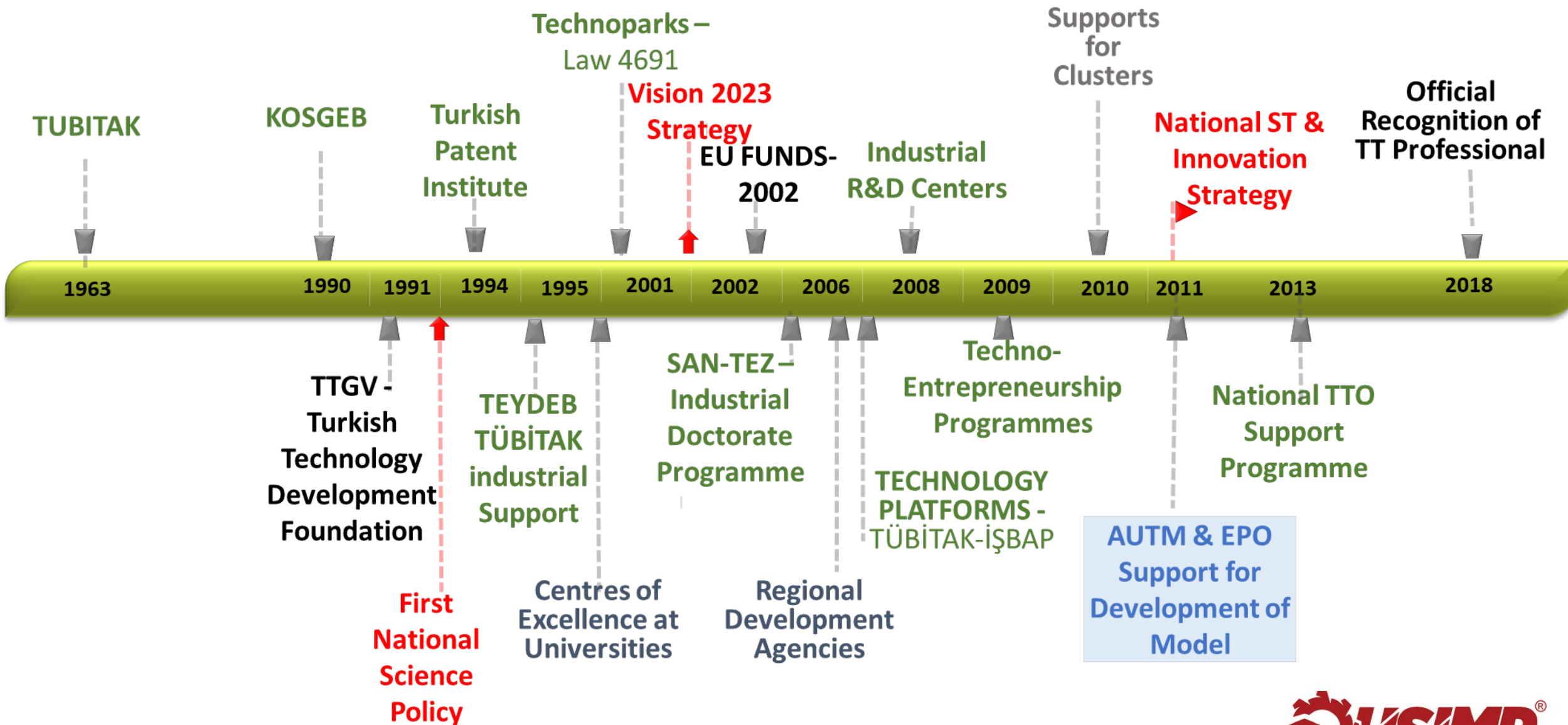
- Individual stakeholders emphasizing **their own contributions**,
- Parties reverting to **traditional practices** when faced with difficulties,
- **Scattered goals** instead of focusing on a "collective, single goal,"
- **Complex** administrative and bureaucratic processes in multi-partner structures.

Main concern has now evolved into ***“Knowledge Exchange”*** to/with industry for accelerating the improvement of existing technologies and adoption of novel technologies within the ecosystem.

## *National Level- Public Policies*

- **A National Science, Technology & Innovation Strategy** – *prepared and implemented*
- **Establishment of respective state organizations** to lead the transformation – *National Research Council, Patent Institute, etc*
- **Allocation of Government funds** for capacity building in academia & industry - initiation of *institutional & national R&D support mechanisms and official involvement in international networks,*
- **Introduction of incentives** customized to Regional and Sectoral needs - *Technoparks, Centres of Excellence, Industrial R&D Centres*

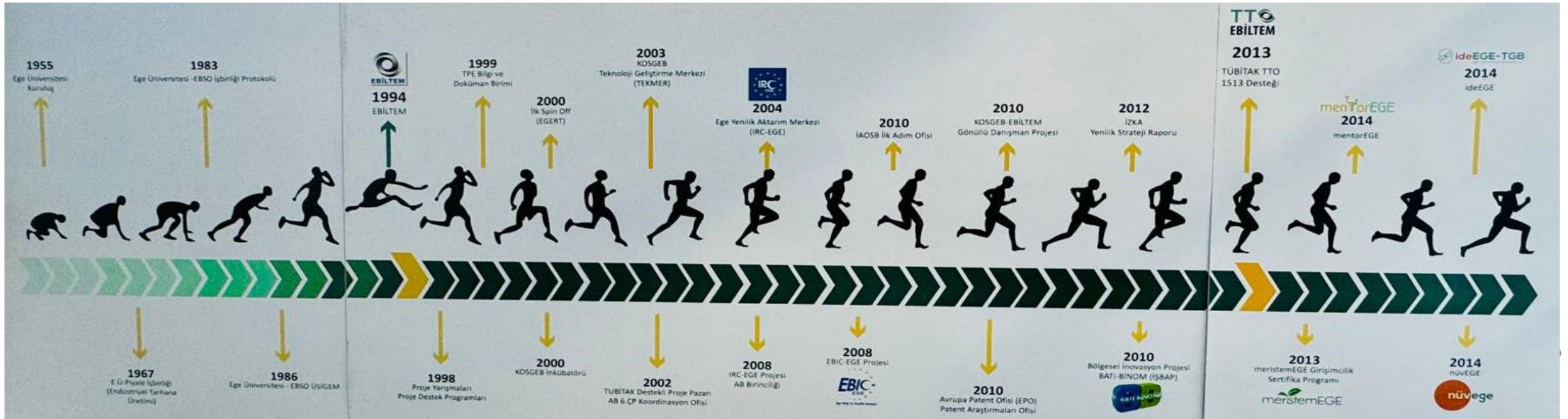
# Time-line for National Maturation



# Stages of Ecosystem Evolution - 2

## *At Individual Institution Level – University / Companies*

- Different awareness **activities tailored** for each stakeholder – *Novel tools specifically developed for target audiences*
- Involvement in national & international **networks** – *capacity building and inspiration from ‘best practices’*
- **Free services** proving institutional capability and potential
- Establishment of **trust**



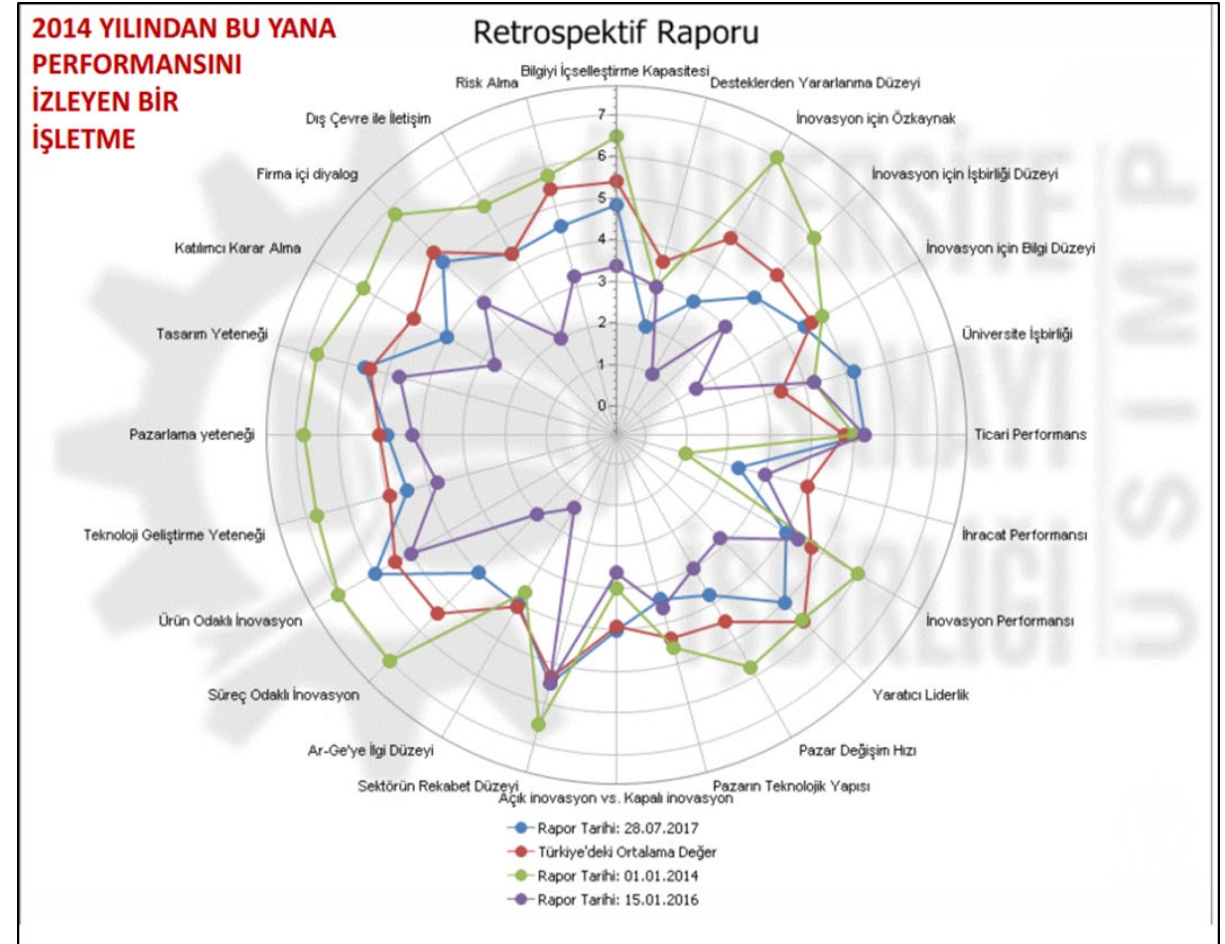
## Targeting Industry by individual Institutions

- Industry Angels / Departmental **Ambassadors**
- Grandfather **Mentoring**
- Project **Brokerage Events** & Competitions
- **Liaison Points of State Offices** targeting to be a one-stop-shop for stakeholders - *TPE, KOSGEB, PATLIB,*
- Contact offices in **industrial zones** fo facilitate access
- **Channeling EU supports** for capacity building in the ecosystem - *IRC, EEN networks, Mobility Programmes, PUM Foreign Consultant supports*
- Initiation of **regional clusters** - *BATIBINOM, INOVIZ,*
- Establishment of a **Technopark & Incubation Centre**
- Sponsorship / Membership **Programmes**



## Targeting the Ecosystem by USIMP

- National Congresses - 2008
- USIMP Innovation Assessment Tool - 2014
- National Patent Fair - 2015
- Definition of TT Profession – *official recognition*, 2018
- ATTP Membership – 2018
- RTTP Accredited Courses- 2019
- Training Programs & Seminars at different levels -2020
- TTO Self Assessment Tool -2020
- Open Innovation Platform -2022



# Stages of Ecosystem Evolution - 3

## *At Broader Ecosystem Level*

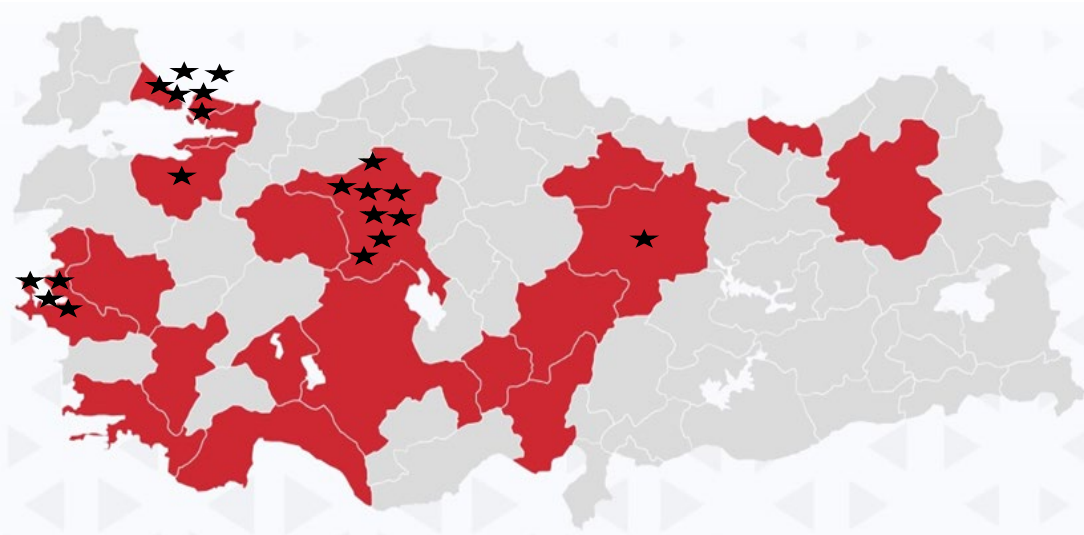
- **External investors** see and opportunity and step in – *wide spread visibility of entrepreneurial activities supported by all stakeholders and encouraged by the state*
- **Professional** service providers appear
- **Trust and networks** develop
- **A true ecosystem and market** is created with *pre-competitive “Platform-based” Programs*

# Precompetitive High Technology Platforms

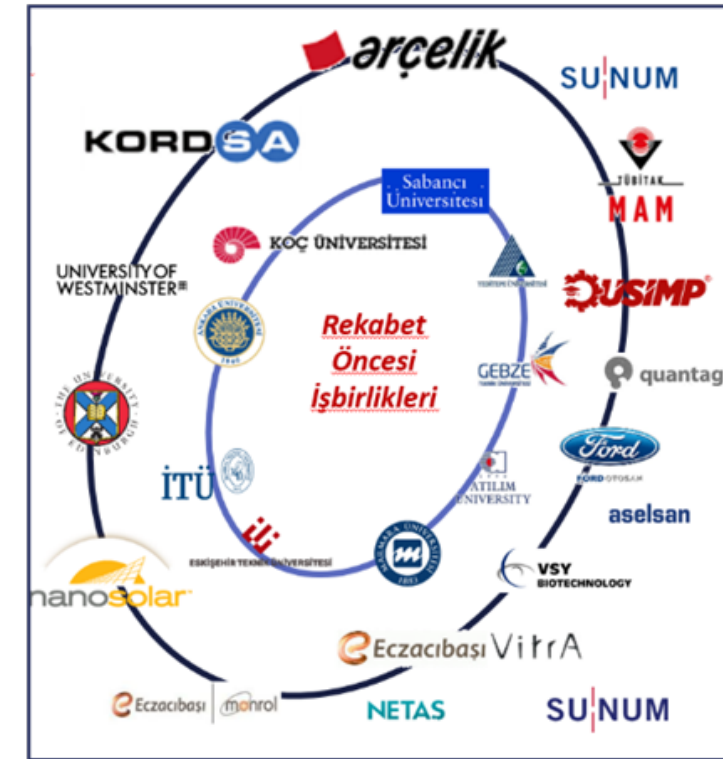
*-20 Platforms, 252 Projects*

**Nationwide led by Research Institutions, involving**

- 109 Companies
- 70 Universities
- 12 Research Centres
- 50 International Organisations
- 1550 Researchers
- 959 Grants for students



**TUBITAK 1004- On-going since February 2021**  
**Integrated, Scalable, Functional Nanostructures and Systems: NANOSIS**



**24 Partners** – 12 academic, 12 industrial and 145 researchers

# Clues to SUCCESS

*- under constraints and weaknesses of the existing ecosystem*

- **Objective evaluation** of strengths / weaknesses – building on strengths,
- **Strategic planning** with long sighted vision,
- **Priority setting** approach,
- Exploiting **emerging opportunities**
- **Successful relations** with internal / external partners,
- **Lean** internal decision making structures
- **Broad based** projects involving many departmental staff
- Success in **raising money** from other sources
- **Not being afraid of failure** – *60 project proposals – 20 projects*
- **Turning threats to opportunities**



# Main Take Aways

## *What can Universities do to Improve the Absorptive Capacity of Local Industry?*

- **Identify the specific needs of the society** (sectors / regions) with an international perspective
- Identify **niche areas** for excellence with a scientific-technological perspective,
- **Influence and lead** the local agenda for a **revolutionary transformation**,
- Consider the **real-life constraints** to produce "transformative" solutions,
- Provide suitable **platforms** for objective & fair competitions
- Respect the **autonomy** of different decision-makers,
- Select only on the basis of **capability & excellence** to motivate
- **Identify unique points** - strengths & opportunities – *individual / institutional*
- **Focus supports** on potentially promising assets
- Ensure sustainability through institutionalized collaborations.
- **Create success stories** for synergistic effect



*What is Needed?*

*All ecosystem components functioning in a synchronised and synergistic manner, like the Nature!*

*THANK YOU*



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